

The Main Steamline Break Transient Analysis for Advanced Boiling Water Reactor Using TRACE, PARCS, and SNAP Codes

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Abstract : To confirm the reactor and containment integrity of the Advanced Boiling Water Reactor (ABWR), we perform the analysis of main steamline break (MSLB) transient by using the TRACE, PARCS, and SNAP codes. The process of the research has four steps. First, the ABWR nuclear power plant (NPP) model is developed by using the above codes. Second, the steady state analysis is performed by using this model. Third, the ABWR model is used to run the analysis of MSLB transient. Fourth, the predictions of TRACE and PARCS are compared with the data of FSAR. The results of TRACE/PARCS and FSAR are similar. According to the TRACE/PARCS results, the reactor and containment integrity of ABWR can be maintained in a safe condition for MSLB.

Keywords : advanced boiling water reactor, TRACE, PARCS, SNAP

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